

# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	I	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/832,867		04/12/2001	Shunpei Yamazaki	740756-2294	1394	
31780	7590	02/28/2006		EXAMINER		
ERIC ROE	ERIC ROBINSON				LEWIS, MONICA	
PMB 955 21010 SOU	THBANK	CST.		ART UNIT	PAPER NUMBER	
	FALLS,	VA 20165		2822		
				DATE MAILED: 02/28/200	6	

Please find below and/or attached an Office communication concerning this application or proceeding.

			HIA					
	Application No.	Applicant(s)						
	09/832,867	YAMAZAKI ET AL.						
Office Action Summary	Examiner	Art Unit						
	Monica Lewis	2822						
<ul> <li>The MAILING DATE of this communication</li> <li>Period for Reply</li> </ul>	appears on the cover sheet w	vith the correspondence addre	ss					
A SHORTENED STATUTORY PERIOD FOR RE WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFI after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory pe  - Failure to reply within the set or extended period for reply will, by st Any reply received by the Office later than three months after the mearned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUN R 1.136(a). In no event, however, may a riod will apply and will expire SIX (6) MC atute, cause the application to become A	ICATION. I reply be timely filed INTHS from the mailing date of this committee the committee of the committe						
Status								
1) Responsive to communication(s) filed on 2	8 November 2005.							
·— · ·—	This action is non-final.							
3) Since this application is in condition for allo closed in accordance with the practice und	•	•	erits is					
Disposition of Claims								
4)⊠ Claim(s) <u>1-14,25-38 and 51-64</u> is/are pend	ing in the application							
4a) Of the above claim(s) is/are with								
5)⊠ Claim(s) <u>51-64</u> is/are allowed.								
6) Claim(s) 1,2,5,6,9,10,13,14,25,26,29,30,33	3,34,37 and 38 is/are rejected	d.						
7) Claim(s) 3,4,7,8,11,12,27,28,31,32,35 and								
8) Claim(s) are subject to restriction ar								
Application Papers								
9)☐ The specification is objected to by the Exan	niner.							
10)⊠ The drawing(s) filed on 12 April 2001 is/are	☑ The drawing(s) filed on 12 April 2001 is/are: a) ☐ accepted or b) ☑ objected to by the Examiner.							
Applicant may not request that any objection to	the drawing(s) be held in abeya	ınce. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the cor	· ·							
11)☐ The oath or declaration is objected to by the	Examiner. Note the attache	ed Office Action or form PTO-	152.					
Priority under 35 U.S.C. § 119								
12) Acknowledgment is made of a claim for force a) All b) Some * c) None of:  1. Certified copies of the priority docum 2. Certified copies of the priority docum 3. Copies of the certified copies of the papplication from the International But * See the attached detailed Office action for a	nents have been received.  The sents have been received in the priority documents have been reau (PCT Rule 17.2(a)).	Application No n received in this National Sta	age					
Attachment(s)								
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> </ol>	· -	Summary (PTO-413) o(s)/Mail Date						
<ul> <li>2) Notice of Draitsperson's Patent Drawing Review (P10-946)</li> <li>3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB Paper No(s)/Mail Date 11/05;12/05.</li> </ul>	′	Informal Patent Application (PTO-15	2)					

#### **DETAILED ACTION**

1. This action is in response to the request for continued examination filed November 28, 2005.

## Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/28/05 has been entered.

### Response to Arguments

3. Applicant's arguments with respect to claims 1-14, 25-38 and 51-64 have been considered but are most in view of the new ground(s) of rejection.

### Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

## **Drawings**

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s): a) a driver circuit having a n-channel TFT over a substrate (See Claim 2). No new matter should be entered.

Art Unit: 2822

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Page 3

#### Information Disclosure Statement

6. The information disclosure statement filed 12/5/05 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. The Ekisho reference does not have an abstract or etc. in English.

Application/Control Number: 09/832,867 Page 4

Art Unit: 2822

# Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. Claims 1 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413).

In regards to claim 1, Ohtani et al. ("Ohtani") discloses the following:

- a) a pixel portion having a n-channel TFT and a light emitting element over a substrate (101) (For Example: See Figure 1A);
  - b) a channel forming region (104) (For Example: See Figure 1A);
- c) an n-type impurity region (108) adjacent to the channel forming region (For Example: See Figure 1A);
- d) an n-type impurity region (109) adjacent to the n-type impurity region (For Example: See Figure 1A);
- e) a gate insulating layer (103) provided over the active layer (For Example: See Figure 1A);
- f) a gate electrode (105) provided over the gate insulating layer (For Example: See Figure 1A);
- g) a first conductive film (105a) provided over the gate insulating layer (For Example: See Figure 2E);
- h) a second conductive film (105b) provided over the first conductive film, wherein the first conductive film overlaps the channel forming region and the n type impurity region with the gate insulating layer interposed therebetween, and wherein the second conductive film overlaps the channel forming region with the gate insulating layer and the first conductive film interposed between (For Example: See Figure 1A and Figure 2E); and

i) a protecting film (107) in contact with the gate insulating layer and the second conductive film (For Example: See Figure 1A).

In regards to claim 1, Ohtani fails to disclose the following:

a) a n-type impurity region adjacent to the n-type impurity region.

However, Kamiura et al. ("Kamiura") discloses the use of a n-type impurity region (12) adjacent to the n-type impurity region (11) (For Example: See Figure 1F). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a n-type impurity region adjacent to the n-type impurity region as disclosed in Kamiura because it aids in lowering OFF current (For Example: See Column 3 Lines 20-25).

Additionally, since Ohtani and Kamiura are both from the same field of endeavor, the purpose disclosed by Kamiura would have been recognized in the pertinent art of Ohtani.

In regards to claim 13, Ohtani discloses the following:

- a) the light emitting device is one selected from the group consisting of an EL display, a video camera, a digital camera, a portable computer, a personal computer, a portable telephone, and a car audio stereo (For Example: See Column 22 Lines 50-55).
- 9. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413) and Lee et al. (U.S. Patent No. 6,225,150).

In regards to claim 2, Yamazaki discloses the following:

- a) pixel portion having a n-channel TFT and a light emitting element over a substrate (For Example: See Figure 1A);
  - b) a channel forming region (For Example: See Figure 1A);
- c) an n-type impurity region adjacent to the channel forming region (For Example: See Figure 1A);

Art Unit: 2822

- d) an n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1A);
- e) an n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1A);
- f) a gate insulating layer provided over the active layer (For Example: See Figure 1A);
- g) a gate electrode provided over the gate insulating layer (For Example: See Figure 1A); and
- h) a first conductive film provided over the gate insulating layer (For Example: See Figure 1A);
- i) a second conductive film provided over the first conductive film, wherein the first conductive film overlaps the channel forming region and the n type impurity region with the gate insulating layer interposed therebetween, and wherein the second conductive film overlaps the channel forming region with the gate insulating layer and the first conductive film interposed between (For Example: See Figure 1A); and
- j) a protection film in contact with the gate insulating film and the second conductive film (For Example: See Figure 1).

In regards to claim 2, Ohtani fails to disclose the following:

a) a n-type impurity region adjacent to the n-type impurity region.

However, Kamiura discloses the use of a n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1F). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a n-type impurity region adjacent to the n-type impurity region as disclosed in Kamiura because it aids in lowering OFF current (For Example: See Column 3 Lines 20-25).

Additionally, since Ohtani and Kamiura are both from the same field of endeavor, the purpose disclosed by Kamiura would have been recognized in the pertinent art of Ohtani.

Art Unit: 2822

b) a driver circuit having a n-channel TFT over a substrate.

However, Lee et al. ("Lee") discloses the use of a driver circuit having a n-channel TFT over a substrate (For Example: See Figure 3J). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a driver circuit having a n-channel TFT over a substrate as disclosed in Lee because it aids in preventing off current (For Example: See Column 2 Lines 20-39).

Additionally, since Ohtani and Lee are both from the same field of endeavor, the purpose disclosed by Lee would have been recognized in the pertinent art of Ohtani.

In regards to claim 14, Ohtani discloses the following:

- a) the light emitting device is one selected from the group consisting of an EL display, a video camera, a digital camera, a portable computer, a personal computer, a portable telephone, and a car audio stereo (For Example: See Column 22 Lines 50-55).
- 10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413) and Silicon Processing by S. Wolf.

In regards to claim 5, Ohtani discloses the following:

a) the second gate electrode comprises aluminum (For Example: See Column 6 Line 1-6).

In regards to claim 5, Ohtani fails to disclose the following:

a) the first conductive film comprises tungsten.

However, Wolf discloses the use of a conductive film that comprises tungsten (For Example: See Page 398). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use

Art Unit: 2822

of tungsten as disclosed in Wolf because it aids in reducing leakage current (For Example: See Page 398).

Additionally, since Ohtani and Wolf are both from the same field of endeavor, the purpose disclosed by Wolf would have been recognized in the pertinent art of Ohtani.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Lee et al. (U.S. Patent No. 6,225,150) and Silicon Processing by S. Wolf.

In regards to claim 6, Ohtani discloses the following:

a) the second gate electrode comprises aluminum (For Example: See Column 6 Line 1-6).

In regards to claim 6, Ohtani fails to disclose the following:

a) the first conductive film comprises tungsten.

However, Wolf discloses the use of a conductive film that comprises tungsten (For Example: See Page 398). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of tungsten as disclosed in Wolf because it aids in reducing leakage current (For Example: See Page 398).

Additionally, since Ohtani and Wolf are both from the same field of endeavor, the purpose disclosed by Wolf would have been recognized in the pertinent art of Ohtani.

Art Unit: 2822

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413) and *Microchip Fabrication* by Peter Van Zant.

In regards to claim 9, Ohtani discloses the following:

a) the gate electrode is covered by an insulating film (111) (For Example: See Figure 1A).

In regards to claim 9, Ohtani fails to disclose the following:

a) the insulating film comprises at least one of a silicon nitride film and a silicon oxynitride film.

However, Van Zant discloses the use of silicon nitride (For Example: See Page 391). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of silicon nitride as disclosed in Van Zant because it aids in providing better protection (For Example: See Page 391).

- 13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Lee et al. (U.S. Patent No. 6,225,150) and *Microchip Fabrication* by Peter Van Zant.
  - In regards to claim 10, Ohtani discloses the following:

a) the gate electrode is covered by an insulating film (For Example: See Figure 1A).

In regards to claim 10, Ohtani fails to disclose the following:

a) the insulating film comprises at least one of a silicon nitride film and a silicon oxynitride film.

Art Unit: 2822

However, Van Zant discloses the use of silicon nitride (For Example: See Page 391). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of silicon nitride as disclosed in Van Zant because it aids in providing better protection (For Example: See Page 391).

Page 10

14. Claims 25 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413) and Sukegawa (Japanese Patent No. JP405257137A).

In regards to claim 25, Ohtani discloses the following:

- a) a pixel portion having a n-channel TFT and a light emitting element over a substrate (For Example: See Figure 1A);
  - b) a channel forming region (For Example: See Figure 1A);
- c) an n-type impurity region adjacent to the channel forming region (For Example: See Figure 1A);
- d) an n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1A);
- e) a gate insulating layer provided over the active layer (For Example: See Figure 1A);
- f) a gate electrode provided over the gate insulating layer (For Example: See Figure 1A);
- g) a first conductive film provided over the gate insulating layer (For Example: See Figure 2E); and
- h) a second conductive film provided over the first conductive film, wherein the first conductive film overlaps the channel forming region and the n type impurity region with the gate insulating layer interposed therebetween, and wherein the second conductive film overlaps the channel forming region with the gate insulating layer and the first conductive film interposed between (For Example: See Figure 1A and Figure 2E).

In regards to claim 25, Ohtani fails to disclose the following:

a) a n-type impurity region adjacent to the n-type impurity region.

However, Kamiura discloses the use of a n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1F). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a n-type impurity region adjacent to the n-type impurity region as disclosed in Kamiura because it aids in lowering off current (For Example: See Column 3 Lines 20-25).

Additionally, since Ohtani and Kamiura are both from the same field of endeavor, the purpose disclosed by Kamiura would have been recognized in the pertinent art of Ohtani.

b) a coloring layer over the gate electrode.

However, Sukegawa discloses the use of a coloring layer (9) over a gate electrode (2) (For Example: See Figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a coloring layer over the gate electrode as disclosed in Sukegawa because it aids in providing color at a low cost (For Example: See Abstract).

Additionally, since Ohtani and Sukegawa are both from the same field of endeavor, the purpose disclosed by Sukegawa would have been recognized in the pertinent art of Ohtani.

In regards to claim 37, Ohtani discloses the following:

a) the light emitting device is one selected from the group consisting of an EL display, a video camera, a digital camera, a portable computer, a personal computer, a portable telephone, and a car audio stereo (For Example: See Column 22 Lines 50-55).

Page 12

Application/Control Number: 09/832,867

Art Unit: 2822

15. Claim 26 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Lee et al. (U.S. Patent No. 6,225,150) and Sukegawa (Japanese Patent No. JP405257137A).

In regards to claim 26, Yamazaki discloses the following:

- a) pixel portion having a n-channel TFT and a light emitting element over a substrate (For Example: See Figure 1A);
  - b) a channel forming region (For Example: See Figure 1A);
- c) an n-type impurity region adjacent to the channel forming region (For Example: See Figure 1A);
- d) an n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1A);
- e) an n-type impurity region adjacent to the n-type impurity region (For Example: See Figure 1A);
- f) a gate insulating layer provided over the active layer (For Example: See Figure 1A);
- g) a gate electrode provided over the gate insulating layer (For Example: See Figure 1A); and
- h) a first conductive film provided over the gate insulating layer (For Example: See Figure 1A); and
- i) a second conductive film provided over the first conductive film, wherein the first conductive film overlaps the channel forming region and the n type impurity region with the gate insulating layer interposed therebetween, and wherein the second conductive film overlaps the channel forming region with the gate insulating layer and the first conductive film interposed between (For Example: See Figure 1A).

In regards to claim 26, Ohtani fails to disclose the following:

a) a n-type impurity region adjacent to the n-type impurity region.

However, Kamiura discloses the use of a n-type impurity region adjacent to the

Art Unit: 2822

n-type impurity region (For Example: See Figure 1F). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a n-type impurity region adjacent to the n-type impurity region as disclosed in Kamiura because it aids in lowering OFF current (For Example: See Column 3 Lines 20-25).

Additionally, since Ohtani and Kamiura are both from the same field of endeavor, the purpose disclosed by Kamiura would have been recognized in the pertinent art of Ohtani.

b) a driver circuit having a n-channel TFT over a substrate.

However, Lee discloses the use of a driver circuit having a n-channel TFT over a substrate (For Example: See Figure 3J). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a driver circuit having a n-channel TFT over a substrate as disclosed in Lee because it aids in preventing off current (For Example: See Column 2 Lines 20-39).

Additionally, since Ohtani and Lee are both from the same field of endeavor, the purpose disclosed by Lee would have been recognized in the pertinent art of Ohtani.

c) a coloring layer over the gate electrode.

However, Sukegawa discloses the use of a coloring layer (9) over a gate electrode (2) (For Example: See Figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of a coloring layer over the gate electrode as disclosed in Sukegawa because it aids in providing color at a low cost (For Example: See Abstract).

Application/Control Number: 09/832,867 Page 14

Art Unit: 2822

Additionally, since Ohtani and Sukegawa are both from the same field of endeavor, the purpose disclosed by Sukegawa would have been recognized in the pertinent art of Ohtani.

In regards to claim 38, Ohtani discloses the following:

a) the light emitting device is one selected from the group consisting of an EL display, a video camera, a digital camera, a portable computer, a personal computer, a portable telephone, and a car audio stereo (For Example: See Column 22 Lines 50-55).

- 16. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al.
- (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Sukegawa (Japanese Patent No. JP405257137A) and *Silicon Processing* by S. Wolf.

In regards to claim 29, Ohtani discloses the following:

a) the second gate electrode comprises aluminum (For Example: See Column 6 Line 1-6).

In regards to claim 29, Ohtani fails to disclose the following:

a) the first conductive film comprises tungsten.

However, Wolf discloses the use of a conductive film that comprises tungsten (For Example: See Page 398). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of tungsten as disclosed in Wolf because it aids in reducing leakage current (For Example: See Page 398).

Additionally, since Ohtani and Wolf are both from the same field of endeavor, the purpose disclosed by Wolf would have been recognized in the pertinent art of Ohtani.

Art Unit: 2822

17. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al.

(U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Lee et al.

(U.S. Patent No. 6,225,150) and Sukegawa (Japanese Patent No. JP405257137A) and Silicon

Processing by S. Wolf.

In regards to claim 30, Ohtani discloses the following:

a) the second gate electrode comprises aluminum (For Example: See Column 6 Line 1-6).

In regards to claim 30, Ohtani fails to disclose the following:

a) the first conductive film comprises tungsten.

However, Wolf discloses the use of a conductive film that comprises tungsten (For Example: See Page 398). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of tungsten as disclosed in Wolf because it aids in reducing leakage current (For Example: See Page 398).

Additionally, since Ohtani and Wolf are both from the same field of endeavor, the purpose disclosed by Wolf would have been recognized in the pertinent art of Ohtani.

- 18. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al.
- (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Sukegawa (Japanese Patent No. JP405257137A) and *Microchip Fabrication* by Peter Van Zant.

In regards to claim 33, Ohtani discloses the following:

a) the gate electrode is covered by an insulating film (For Example: See Figure 1A).

Art Unit: 2822

In regards to claim 33, Ohtani fails to disclose the following:

a) the insulating film comprises at least one of a silicon nitride film and a silicon oxynitride film.

However, Van Zant discloses the use of silicon nitride (For Example: See Page 391). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of silicon nitride as disclosed in Van Zant because it aids in providing better protection (For Example: See Page 391).

19. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U.S. Patent No. 6,259,138) in view of Kamiura et al. (U.S. Patent No. 6,288,413), Lee et al. (U.S. Patent No. 6,225,150), Sukegawa (Japanese Patent No. JP405257137A) and *Microchip Fabrication* by Peter Van Zant.

In regards to claim 34, Ohtani discloses the following:

a) the gate electrode is covered by an insulating film (For Example: See Figure 1A).

In regards to claim 34, Ohtani fails to disclose the following:

a) the insulating film comprises at least one of a silicon nitride film and a silicon oxynitride film.

However, Van Zant discloses the use of silicon nitride (For Example: See Page 391). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor device of Ohtani to include the use of silicon nitride as disclosed in Van Zant because it aids in providing better protection (For Example: See Page 391).

Application/Control Number: 09/832,867 Page 17

Art Unit: 2822

# Allowable Subject Matter

20. Claims 3, 4, 7, 8, 11, 12, 27, 28, 31, 32, 35 and 36 objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

21. Claims 51-64 are allowed.

#### Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 571-272-1838. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML January 30, 2006

all